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The Development and validation of an inventory for screening call center representatives

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**THE DEVELOPMENT AND VALIDATION OF AN INVENTORY FOR
SCREENING CALL CENTER REPRESENTATIVES**

A Thesis

Presented to

The Faculty of the Department of Psychology

San Jose State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

by

Ekta Vyas

May 2002

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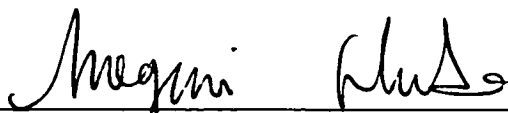
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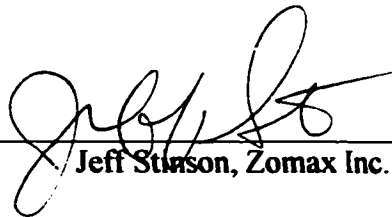
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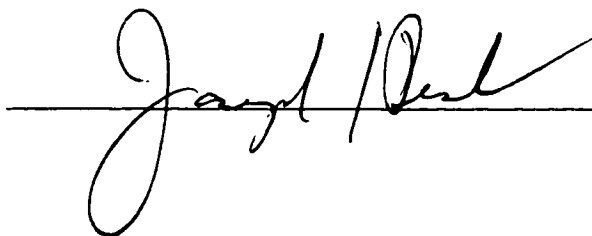


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ABSTRACT

THE DEVELOPMENT AND VALIDATION OF AN INVENTORY FOR SCREENING CALL CENTER REPRESENTATIVES

by Ekta Vyas

In today's customer focused market, one way for a company to differentiate itself is to provide excellent customer service. Although several studies have attempted to identify personality variables associated with good customer service orientation, researchers have generally ignored the service position of a call center agent that does not require face-to-face contact with customers. This study describes the development and concurrent validation of a measure of customer service orientation for call center personnel. Participants for the study were 46 call center representatives of a manufacturing company. Criterion for the study was supervisor-rated job performance of the agents. The results of the study indicate that the measure is a reliable and valid predictor of job performance of customer service providers. Also, the measure was found to be predictive of an agent's performance in internal functioning, exhibited through characteristics such as adaptability, maintaining working relationships and punctuality. However, personality variables associated with good interpersonal skills did not show a significant relation with either the external or internal performance of the call center agents. Implications of these findings are discussed in terms of both selection and future research.

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The Development and Validation of an Inventory for Screening Call Center Representatives

Telephone agents are increasingly becoming the backbone of businesses today because they are the frontline service providers who meet the needs of customers on a day to day basis. It seems very practical and reasonable to believe that the type of personality and customer service qualities required of a call center personnel, or more specifically a telephone agent, may be very different from those required of a customer service representative in a fast food restaurant, a hospital or in a retail store. However, researchers have not differentiated between the categories of customer service providers, and the type of services that are being required of and provided by them. One outcome of this lack of differentiation have been attempts to develop selection instruments that measure the customer service orientation of service personnel without any specific focus on the type of service provided. Thus, despite the fact that various instruments have been devised to measure customer service orientation, there is no instrument specifically for the customer service orientation of applicants whose main job consists of multiple interactions via phone with absolutely no face to face communication with the customers. Therefore, the purpose of this study is to develop and validate a personality based instrument designed to assess the customer service orientation of call center personnel.

Selection and Customer Service Orientation

In today's customer-focused market, achieving success and excellence in business, for most organizations, depends to a large extent on satisfying customer needs.

This, in turn, depends to a great extent on employee customer service behavior (Rogelberg, Barnes-Farrell, & Creamer, 1999). This increasing trend toward more customer-focused business makes it necessary for almost any organization to find appropriate personnel for their service positions. In a pursuit to find good service personnel, organizations have been using a variety of employee selection methods. The most frequently used methods traditionally have included interviews, test of technical and verbal skills, past experience in customer service type jobs, and job previews.

More recently, a new dimension to personnel selection has emerged in the form of personality-based selection. According to Frei and McDaniel (1998), there has been a resurgence in the use of personality measures for personnel selection in the past 10 years. Ployhart (2000) believes that at least three factors are responsible for this resurgence. First, the development of the five-factor model (Barrick & Mount, 1991) provided researchers with a framework to consider construct linkages to various criteria. Second, several meta-analytic studies used variations of the five-factor model to assess the predictive validity of personality constructs, and found that personality predicts job performance (Frei & McDaniel, 1998). Finally, the little to no adverse impact nature of personality based selection instruments gave an impetus to personality testing in selection (e.g., Hogan, Hogan & Busch, 1984). Ployhart (2000) also notes that despite the fact that many of the observed validities for personality tests are small to moderate, personality-based tests can provide a reasonable amount of incremental validity over ability tests because the correlation between personality tests and ability has been found to be relatively low.

The customer service industry has not remained untouched by these developments in the area of personnel selection. While traditional recruitment methods emphasized technical skills and experience, rather than the ability to relate to customers, researchers now acknowledge that in a customer-focused environment, job performance requires more than just technical knowledge (Hogan et al., 1984). This has resulted in attempts to measure customer service orientation and identify related personality characteristics. The increase in personality-based selection of service providers is a result of many factors. First, there is a growing belief that not everything is evident in an interview or a resume, even to experienced interviewers. Resumes yield relatively little useful information as most of them only provide hard core facts about the person's background, with scant indication of the person's capabilities and personalities. Similarly, the impression gained from an interview may be superficial as it fails to tap into the attitudinal and behavioral traits of the job applicant. Second, as the characteristics needed to provide service may be very different from characteristics needed for management and technical positions, specific selection techniques are needed to determine the suitability for service type of jobs. Finally and most importantly, it is increasingly being accepted that differences in employee customer service behavior are typically due to the dispositional variables associated with the service provider (Rogelberg et al., 1999). Moreover, personality characteristics have become measurable and quantifiable thus providing added value in selection of personnel.

A growing body of literature related to customer service orientation and personnel selection today recognizes that selection, based on customer service oriented personality

characteristics, is possible and achievable through more empirically driven approaches (Hogan et al., 1984). All these factors have led to the development of various personality based instruments for screening and selection purposes. Because service dimensions of customer service type jobs have been empirically shown to be related to the service provider's personality. The goal of this study is to develop and validate a personality-based instrument designed to identify individuals for a customer service oriented position in a call center setting. To attain the objective of the current study, a review of the existing literature using previously validated and reliable personality inventories for the selection of customer-service representatives was undertaken.

Review of the Literature

The purpose of this section is threefold. First, an overview of the current definitions of customer service orientation is presented. Second, a review of existing instruments assessing customer service orientation is undertaken. Finally, a review of the relevant literature on personality attributes associated with an employee's service orientation is presented. An examination of the dimensionality of the construct of customer service orientation will also be included in this section.

Definition of Customer Service Orientation

Literature on customer-service orientation reveals that different researchers have conceptualized the construct of service orientation very differently and there is no one widely accepted definition of the construct. According to Hogan and Hogan (1984),

customer service orientation is the level of investment an individual employee has for meeting customer needs and for helping with customer concerns. Hogan et al. (1984) defined and assessed service orientation as “a syndrome containing elements of good adjustment, likeability, social skill, and willingness to follow rules.” Paajanen (1993) believes that individuals rated high in customer service orientation have qualities like friendliness, courteousness, responsiveness, and popularity and likeability. In general, these definitions seem to conceptualize customer service orientation at the attitudinal level, mainly incorporating interpersonal skills necessary to effectively serve the public.

Saxe and Weitz (1982) assessed customer orientation as related to employees’ selling behavior and sales effectiveness and defined customer orientation as “the satisfaction of customer needs at the level of the employee-customer interaction.” They further stated that customer-oriented behaviors lead to the development of long-term relationships between the organization and its customers that are beneficial to both parties. While the previous definitions emphasized on the interpersonal behavioral aspect of the service provider’s personality, this definition seems to view customer orientation as a practice of the marketing concept at the level of the individual salesperson and customer and in terms of the activities directed toward providing customer satisfaction and establishing mutually beneficial, long-term relationships between the organization and customer.

Fausz (1994) noted that service orientation has usually been conceptualized as a multidimensional construct consisting of three to eight factors tapping both attitudinal and behavioral aspects of service orientation. He believes that “at its most basic level,

customer service orientation is a way of doing business on the part of the employees.” He further stated that customer service orientation is, as much a way of thinking as it is the act of performing specific customer-focused behaviors.

The review of the existing definitions reveals that despite its popularity and repeated use, the construct of customer service orientation has not been developed and defined sufficiently in the literature. The existing definitions, thus, are not very helpful in explaining the construct mainly because of the following reasons. First, the construct has been defined very narrowly. While researchers have conceptualized the construct as consisting of several factors, most of the existing construct definitions are very general in nature. For example, while Saxe and Weitz (1982) view customer service orientation only in terms of selling behavior, Hogan et al. (1984) emphasize interpersonal skills. Second, there is no consensus about which components comprise customer-service orientation. While some researchers define customer service orientation as an attitude consisting of components like friendliness and empathy (e.g., Paajanen, 1991), others view it manifested behaviorally through an understanding of the basic rules of product selling, thus involving some sales component (Saxe & Weitz, 1982). Third, though some definitions touch on certain elements of customer service orientation, none of them gives a proper insight into the dimensionality of the construct, i.e., whether it is unidimensional or multidimensional.

These differences and diversity of opinions about the construct may be attributed to the fact that most of the definitions are a result of the deductive approach to scale construction undertaken by scale developers. Since this is very much an exploratory

approach, the definitions were a result of the interpretation of statistics used to uncover the constructs within the items. A review of the previously developed instruments and a critique of their psychometric properties will shed more light on how the construct and its measurement have been studied by various researchers.

Instruments designed to measure customer service orientation

Numerous efforts have been made to develop instruments that can help select people who have a predisposition towards service-oriented jobs. For the purpose of this study a review of some of the most commonly used measures will be undertaken, including the Service Orientation Index by Hogan and Hogan (1992), the PDI customer Service Inventory by Paajanen (1994), and the SOCO scale (Selling Orientation-Customer Orientation Scale) by Saxe and Weitz (1982). A brief description of each instrument follows.

The Service Orientation Index (SOI). The Service Orientation Index was developed to assess the aspects of job performance that are unrelated to technical competence, but crucial for maintaining good relations between an organization and its customers (Hogan & Hogan, 1984). Yet another aim of developing the instrument was to strengthen the case for the usefulness of personality measures in personnel selection.

The development of the SOI was based on the job analysis of nursing aides. Service-oriented individuals were conceptualized as having a predisposition to be helpful, thoughtful, considerate and cooperative. A job-analysis inventory was used to identify the tasks critical to the job. Since they could find no existing measures that

adequately assessed service orientation, the authors used the Hogan Personality Inventory (1983), a self-report instrument comprised of six scales (Intellectuance, Adjustment, Prudence, Ambition, Sociability, and Likeability) to develop an item pool for their service orientation scale. The sample for the study consisted of 101 nursing aides at a hospital. The authors concluded that the SOI seemed to discriminate between nurses who are rude, tactless, and socially inept and those who are pleasant, tactful and socially competent.

The SOI is a true-false questionnaire with an internal consistency reliability of .81. The scale originally had 87 items but currently consists of 12 items after several alterations. Validation of the SOI on a group of healthcare workers revealed a correlation of $r = .31$ ($p < .05$) between SOI scores and service-orientation ratings (Hogan et al., 1984). Further concurrent validation studies were conducted on four additional samples: senior nursing students, employees at a suburban nursing home, clerical personnel in a large insurance firm, and truck drivers.

The scale development work is noteworthy because of the further evaluation of the SOI through concurrent and construct validity studies. One limitation of the instrument, however, is that despite its recommended use for a variety of service-oriented job settings, it may not be useful for service oriented jobs that require an assessment of more than personality variables associated with just social interaction and likeability. In other words, while it holds considerable promise for assessing aspects of job performance that are crucial for maintaining good relations between an organization and its customers, it ignores and does not take into account the assessment of other aspects which are an

integral part of many service-oriented jobs and have considerable impact on the performance of service personnel, for example, personality characteristics associated with stress tolerance or problem solving.

The PDI Customer Service Inventory (CSI). This instrument, developed by Paajanen (1993), was constructed to help identify applicants most likely to exhibit satisfactory behaviors related to interaction with customers of a business. The scale was designed to tap into some sixteen personality dimensions thought to influence customer service behavior regardless of the work setting. A factor analysis of the instrument brought forth five individual personality characteristics (competence, courtesy, friendliness, open-mindedness, and practicality and realism) as factors that influence how effectively employees interact with customers.

The CSI consists of 64 items presented in three types of format: true false; three-choice multiple-choice; and four-choice multiple-choice. The internal reliability estimate for the CSI is .73, and the one-month test-retest stability value was found to be .86. The validity of the instrument was assessed in four job-settings (financial institution, health care, automobile sales, and insurance firm) and the validity studies supported the use of this instrument as a predictor of customer service orientation, with the correlations mostly in the .20s.

A noteworthy characteristic of the scale is that although the instrument is designed for general use, the item selection was based on job analyses. However, a review of the CSI by Bruner, brought forth some limitations. Although the authors of the instrument argued that stability (test-retest reliability) was more important indicator of

reliability than internal consistency, this position stands in opposition to what is now commonly accepted in psychometrics, that stability measures are confounded by various factors and should not be depended upon (Bruner, 2000). Further, the review stated that the evidence of dimensionality, reliability, and validity of scores from the instrument is weak primarily because it is inappropriate for so many variables to be represented in the global scores comprising CSI. Yet another limitation that cannot be overlooked is that while the developers have positioned the instrument to be appropriate for a variety of service-related jobs, Paajanen (1993) himself cautioned individuals interested in using the CSI to assess whether or not the customer service position they are filling is similar to positions used in the validation studies (Krautheim, 1997).

Selling Orientation – Customer Orientation Scale (SOCO). Saxe and Weitz (1982)

developed a measure of customer-orientation, the SOCO scale, designed to assess the degree to which salespeople engage in customer-oriented selling as well as the ability of salespersons to help satisfy their customers' needs. Within the context of interpersonal behavior models incorporating the dimensions of “concern for self” and “concern for others”, customer orientation is related to “concern for others” dimension (Saxe & Weitz, 1982). The authors concluded that the use of customer-oriented selling was related to the ability of the salespeople to help their customers and the quality of the customer-salesperson relationship.

The SOCO scale consists of 24 items presented on a nine-point Likert-type format. The coefficient alpha for the scale was reported to be .86 for the first sample of salespeople and .83 for the second sample. Convergent validity estimates for the scale

with a measure of long-term versus short-term orientation (developed in the same study) was .56, while the discriminant validity was assessed by correlating scores on SOCO scale with those on Marlow-Crowne Social Desirability Scale with the resulting correlation between the two being zero.

The study is noteworthy for assessing and demonstrating content, convergent and discriminant validity of the SOCO scale. However, performance ratings by supervisors and customer satisfaction ratings of the salespeople were not included in the study and thus there is no established predictive validity of the instrument. Further, the scale can be used in very few job settings, as its use is restricted to the assessment of service orientation among salespeople only.

Because there is no unanimous opinion about the definition and dimensionality of the customer service orientation construct, it is not surprising that a host of measuring instruments have been designed to assess the different dimensions of an individual's customer service orientation. This inconsistent operationalization of the construct suggests the need for some construct validation efforts. An important first step in this direction has been the attempts to identify personality characteristics that may be related to good customer service performance. The following section presents a review of the relevant research on personality attributes associated with an employee's customer service orientation.

Personality Characteristics and Customer Service Orientation

In previous years, researchers have questioned the use of personality questionnaires for screening and selection purposes, mainly due to the disappointing results regarding the validity of such tests (e.g., Ellis, 1946; Ghiselli & Barthol, 1953; Guion & Gottier, 1963). Hogan et al. (1984), believed that the earlier view that personality measures are not useful predictors of on-the-job performance could be considered fair given the evidence on which it was based. But advances in personality psychology have lead to the reexamination of such measures in personnel selection. As stated earlier, the emergence of the five-factor model of personality contributed much towards establishing the relation between personality and performance. The following review will shed light on the links between customer service and the big-five dimensions of personality as explored by the researchers. Further, an examination of the elements and dimensionality of service orientation is presented.

Customer-Service and the Big-Five Personality Dimensions. One area in which personality scales have been widely used in the selection of personnel is that of customer service. According to Barrick and Mount (1991), personality tests may predict job performance above and beyond cognitive tests, especially for occupations like customer service representatives that require interpersonal skills and social intelligence. However, in order to utilize such tests, researchers must first identify the personality traits that are most closely related to good customer service performance. A number of studies now support the taxonomy of the Big Five personality dimensions of extraversion (the extent to which a person is talkative, assertive, sensation-seeking, and active), neuroticism (a person's emotional stability, including anxiousness, hostility, and vulnerability),

agreeableness (personality variables such as trusting, cooperative and good naturedness), conscientiousness (includes variables such as orderliness, achievement striving, and dutifulness), and openness to experience (assesses a person's imagination and intellect). Efforts have been made to determine which of these relate to performance in the occupational category of customer service.

Despite the fact that there are differences of opinion in how broad or narrow traits should be to measure customer service orientation, there is evidence that even the relatively broad dimensions of personality such as those measured by the NEO Personality Inventory are related to performance in the customer service domain. Barrick and Mount (1991) themselves hypothesized that agreeableness and extraversion would be valid predictors of job performance for occupations that require interaction or cooperation with others (Krautheim, 1997). They found conscientiousness predicted job performance regardless of occupational category. A support for this comes from Fausz (1994), who after a study of the literature, asserted that many of the researchers studying customer service orientation have identified the Big Five personality dimensions of conscientiousness and agreeableness to relate to good customer service performance. Fausz, in a study of nurses, himself found a significant and positive relationship between agreeableness, as measured by the agreeableness scale of the NEO-PI, and the supervisor ratings of an employee's customer service orientation. Support for this also comes from the fact that most of the existing customer service orientation instruments have some measure of the agreeableness factor. Given the nature of many customer service jobs with

regard to being accepting and non-judgmental in dealings with others, it is clear that agreeableness is desirable.

Additional support for the use of the Big Five personality variables as predictor of good customer service performance comes from studies examining the relationship between validated self-report measures of personality and customer service. In an attempt to explore both the construct validity of a measure of customer service and the personality characteristics associated with good customer service, Furnham and Coveney (1996) looked at the relationship between customer service as measured by the Customer Service Questionnaire (Saville & Holdsworth, 1992) and personality as measured by the NEO-Personality Inventory (Costa and McCrae, 1989). Conscientiousness was found to relate to six customer service traits, with the strongest correlation with attitudes toward authority, approach to organizing, and need for results. Likely, scores on extraversion were strongly and positively related to scores on the subscales of the customer service questionnaire, particularly relations with people. The same study also found a strong negative correlation between neuroticism and many of the questionnaire's subscales, particularly emotional sensitivity. On the basis of the findings of the study Furnham and Coveney concluded that stable, conscientious, extraverts are best suited to customer-related jobs.

Validity of the Big-Five personality classification for predicting customer service performance has also been supported by recent meta-analytic studies. In an effort to review the criterion and construct validity of customer service measures in personnel selection, Frei and McDaniel (1998), using a meta-analytic approach, studied the

correlations between service orientation inventories and measures of personality. The results of the study showed high correlation between customer service and the Big-Five measures of agreeableness, emotional stability, and conscientiousness. This led them to conclude that those with high service orientation are friendly, stable and dependable.

Research based on the “Big-Five” holds promise for developing a theoretical understanding of the effects of personality on job performance of customer service representatives. Improved theoretical understanding of the effect of personality on the job performance of service personnel holds promise for identifying traits that “generalize” across a diverse array of work settings. In addition, researchers have attempted to determine relatively narrower personality traits or elements that relate to effective customer service performance. This emphasis is based on the premise that narrower personality trait measures predict specific criteria better than broader such measures. Borman et al., (1997), in a review of personnel selection research, noted that researchers (e.g., Powell et al, 1995) have found that although the Big-Five predicted global measures of performance, more specific facets of these measures predicted more specific dimensions of customer service. The following section thus focuses on the examination of literature that relates to narrower and more specific personality traits found to be associated with performance in customer service roles.

Specific Traits and Dimensions of Service Orientation. As stated, developing a customer service profile has not been limited to broader dimensions like the ones measured by the NEO PI. Researchers have focused on finding other specific and important characteristics associated with good and quality service, though there is no unanimous opinion on the

number of kind dimensions. Frei and McDaniel (1998), after studying the existing service orientation inventories, concluded that such inventories measure a syndrome or pattern of personality traits that is associated with good performance in customer service jobs.

According to them, there are no specific patterns of characteristics that predict service orientation. Rather, those developing such tests use job analysis as a method to identify which personality characteristics are important to be able to carry out such jobs.

The disagreement over the number and kind of dimensions needed to measure a person's customer service orientation is evident from the fact that Hogan and Hogan (1992) identify six general personality-based dimensions of service orientation, Folgi and Whitney (1991) support four, Paajanen (1991) suggests five, while Saxe and Weitz (1982) claim that to be able to measure customer service behavior, seven categories need to be incorporated. While Hogan and Hogan (1986) identified virtuous, empathetic, and sensitive as factors explaining the construct of service-orientation, Folgi and Whitney (1991) identified four factors for the same purpose and named them as active customer relations, polite customer relations, helpful customer relations, and personalized customer relations.

In an attempt to use the variable of service orientation as a predictor of quality performance, Baydoun, Rose and Emperado (2001) conducted a study which identified twelve elements of customer service type jobs with 5 dominant categories emphasizing on strong interpersonal skills. These included being courteous/polite; maintaining fast, friendly service; being reliable/dependable; getting along with others; and attending to customer needs. Rest of the categories related to functional aspects of the job and

included serving quality product, conducting suggestive selling, working well under pressure, successfully upselling, cleaning, effectively handling cash, and (not) stealing.

A substantial contribution to the understanding of the concept of service quality and factors influencing it was made by Parasuraman, Zenthaml, and Berry (1985) who proposed a 10-dimensional model of service quality. The 10 dimensions of service quality include reliability (consistency of performance and dependability), responsiveness (willingness or readiness to provide service), competence (required skills and knowledge to perform the service), access (approachability and ease of contact), courtesy (politeness, respect, consideration and friendliness of contact personnel), communication (keeping the customers informed in language they can understand and listening to them), and understanding (knowing the customer and making the effort to understand the customer's needs).

Yet another dimensional model of individual performance in customer service roles was developed by Bjamadottir (1997), who attempted to identify the individual employee behaviors associated with perceived effective and ineffective customer service. The 10 dimensional model includes response (responding quickly to new customers as they enter facility or establish contact in other ways), listening (listening to customers and asking questions to accurately diagnose their needs), information (providing customers with full and accurate information, tailored to their characteristics and needs), processing (performing core job tasks and processing routine service-related transactions thoroughly and without error), follow-through (giving undivided and sustained attention to customer needs for as long as it takes to complete service), extra mile (offering more than expected

and demonstrating a willingness to go beyond basic job requirements to solve customers' problems), redress (accepting responsibility for service-related problems, regardless of who is at fault), courtesy (demonstrating common courtesy and respect for all customers by avoiding negative facial expressions and tones of voice, inconsiderate or blunt remarks and responses, and by refraining from discrimination), friendliness (being friendly towards customers, showing an interest in them as individuals and talking with them on a personal level), and empathy (displaying genuine concern and sincere empathy towards customers in distress and/or customers whose problems cannot be easily remedied).

Summary

Advances in personality psychology over the past few years have indicated that personality traits are associated with self-reported measures of customer service. Studies conducted so far have shown that the Big-five taxonomy of personality offers a useful model to summarize the personality correlates of customer service measures. But despite the tremendous amount of research that has taken place in the field of customer service orientation, there is no generally agreed on definition of service orientation. Similarly, though there is empirical evidence that certain personality characteristics facilitate the expression of behaviors that lead to high customer service orientation, there is no consensus on the number of dimensions needed to measure customer service behavior. Overall, though attempts to establish the construct validity of customer service

orientation have been fruitful, there seems to be no unifying theme in the personality measures of customer oriented behaviors.

Evaluation of Literature

The fundamental changes in the business environment and the increasing emphasis on customer-focused business have led to the emergence of research that explicitly addresses the concept of customer service orientation and the effect of one's customer service orientation on performance. Researchers have demonstrated that personality traits are good predictors of customer service orientation and have also focused on the extent to which certain personality traits affect later service-quality behavior. More recent research examining the personality-performance links in this area also suggests that personality measures can make valid contributions to selection procedures used to identify individuals capable of providing high quality customer service. However, the overview of the attempts to measure customer service orientation and identify personality characteristics associated with it reveals that although attempts have been made to find out what sort of people are best suited to customer service, different researchers have taken different orientations to address the issue.

While some studies have emphasized establishing links between the broader big-five dimensions of personality and performance in the customer service domain, others have explicitly emphasized more specific and narrower traits of the service provider's personality. This difference of opinion is also reflected in the instruments that have been developed to measure service orientation as the lack of unanimity over the definition of

the construct has lead to inconsistent operationalization of the construct from one study to the next.

Employees in the service profession have been classified under the general rubric of “service provider,” even though service provider positions may differ in a number of ways that may be relevant to the role of dispositional variables and context variables as they relate to customer service behavior (Rogelberg, Barnes-Farrell, & Creamer, 1999). Moreover, a review of the existing instruments on measuring customer service behavior shows that such instruments have been generalized and used across industries for any customer service type position despite the fact that the construction and validation of the instrument was done in a very different type of industry and work setting. Scale developers and practitioners have overlooked the fact that the positions and the service encounters of the service providers may be very different in these two cases and thus may warrant measuring different and specific dimensions.

A majority of the research done in the field of service behavior has focused on service providers who typically interact with customers three to four times on a face to face basis such as nurses (Hogan et al., 1984); clerical personnel (Hogan et al. 1984); retail salesclerk (Saxe & Weitz, 1982); and bank tellers (Schneider & Bowen, 1985). The studies conducted have ignored service providers whose interaction with the customers is restricted to telephonic conversation. The type of personality characteristics required of those whose main job is to sit for long hours on the telephone are very different from those personally meeting and interacting with the customers throughout the day.

General responsibilities of the customer service representatives with face-to-face interaction mainly involve helping customers assess their needs, providing direct physical assistance and aid in making purchase decisions, housekeeping and maintenance, ensuring the customer's visit is pleasurable and satisfactory, and taking care of the paperwork for customers. On the other hand, major responsibilities of telephone agents include being customers' first point of contact with the brand or product, providing continuous customer support over the phone by handling calls one after another throughout the day, researching information and making quick decisions on complex issues, and following-up on a timely basis on issues and problems of customers.

Thus, a customer service position in a call center differs in a number of ways from a customer service position in any other setting. First, in a call center position there is no face to face customer contact or interaction, even for a short period of time. As a result, the agent can not rely on non-verbal cues for communication or comprehension. Second, because calls in an incoming call center go to a group of people, not a specific person, agents must be able to handle a variety of transactions. Third, a call center job requires higher tolerance for stress than any other customer service type position not only because of excessive and continuous workload, but also because there is no way of accurately predicting the workload for each day. The pressure is also triggered by the fact that the agents have to adhere to both quality service as well as speed of providing such service so that backed-up queues could be avoided.

Considering the differences mentioned above, it may be inferred that the personality variables associated with performance and success in a call center position are

different from those associated with performance in other customer service type positions. There is no denying the fact that good interpersonal skills are indispensable for jobs requiring any kind of public or customer relations. However, the job of call center representative requires the measurement of other personality variables as well that would help in predicting whether a prospective employee has a predisposition to work efficiently in such a stressful environment while attending to all requisite job demands.

A review of the literature and existing instruments reveals two things. First, no instrument for the specific purpose of measuring personality variables associated with a call center representative's position has been developed or validated. Second, most of the instruments measuring customer service orientation stress interpersonal skills and do not measure other aspects of the job such as tolerance for stress and self-control. The evaluation suggests that researchers studying customer service orientation have focused on particular traits, mainly, interpersonal skills like friendliness, politeness, and helpfulness and most of the instrument development has been done in specific type of job settings (e.g., retail stores, hospitals and food restaurants). Therefore, despite the considerable research and developments in both personality related factors (i.e., the five factor personality taxonomy) and specific customer service oriented variables, the existing instruments are very generic in nature and developing a custom-built device may be more helpful to measure the service orientation of call center personnel.

The purpose of this study is to develop a personality based customer service-oriented measure specifically designed for call center agents, present the validity of the newly created measure using supervisory performance ratings, and discuss the

implications of these findings in terms of personnel selection practices. The study would look at the multidimensional aspect of customer service orientation and provide additional insight into the customer service construct as it relates to the service position in a call center setting.

Method

Participants

Participants for the study included currently employed call center representatives, as well as their immediate supervisors and managers. All participants were employed at the call center of a manufacturing company, which is an outsource provider for customer service, CD/DVD manufacturing, fulfillment and shipping. The participants held the position of customer service representatives answering inbound calls from software developers, IT professionals and purchasing agents.

Fifty call center representatives, 3 supervisors and 3 managers had an opportunity to participate in the study. A total of forty-six call center representatives eventually participated, resulting in a response rate of 92%. There was a 100% response rate for supervisors and managers.

The demographic information for the sample is presented in Table 1. The sample of 46 representatives was 28.3% male and 69.6% female, with 2.1% of those not identifying their gender. The representatives ranged in age from 20 to 57 years, with a mean of 34.10 ($SD=9.66$). The ethnic background was most representative for African Americans (37%) followed by Caucasians (26.1%). Many people in the sample were

high school graduates (45.7%), followed by AA degree holders (19.6%), college graduates (13%), and training or vocational certificate holders (13%).

Instruments

Two measures were used for the purpose of the current study. The first measure to be used was a questionnaire measuring the customer service orientation of customer service representatives, while the second measure was a job performance scale, administered to the supervisors and used for the purpose of validating the newly constructed scale. A detailed explanation of the development of the first measure follows.

Scale Development

The aim of the study was the development and validation of a personality based customer service orientation measurement scale. The first step towards the scale development process was construct definition. The definition used in the present study was derived from three sources: (1) a job analysis of customer service position in a call-center setting, (2) an examination of the academic literature and previous definitions of customer service orientation, and (3) a study of other published instruments designed to measure customer service.

The job analysis was conducted to determine the primary job elements of the hourly positions as well as the skills critical for efficient performance on the job. Two separate procedures were used for conducting the job analysis. First, interviews were conducted with both incumbents and supervisors. Second, the telephone agents were observed handling customer calls to gain an insight into the actual working situation and

the needed characteristics to carry out the job, as well as to confirm and complement the information obtained from the interviews.

Definition of the construct. On the basis of the information obtained, customer service orientation was defined as “the predisposition to engage in quality service behavior during interaction with the customers or clients, where quality service is exhibited through good interpersonal behavioral attributes, effective coping with requisite job demands, and operational efficiency and flexibility”. This definition consists of three dimensions, developed on the basis of prioritized and common areas found across job analysis, literature review and the performance elements of call center representatives.

Dimensionality. The Customer Service Orientation Model, presented in Table 2, provides the definition of the dimensions and their respective subscales. The first dimension, good interpersonal behavioral attributes, was defined as the intrinsic demeanor and personality needed to serve the public. The second dimension, effective coping with job demands, was defined as the ability to deal with job related pressures. The third dimension, operational efficiency and flexibility, was defined as the ability to remain competent in customer service type jobs. The dimensions measuring interpersonal behavioral skills and effective coping with job demands were broken into three facets or subscales. The three subscales of interpersonal skills included facets for consideration, empathy, and patience, while the three subscales of coping with job demands included facets for self-control, tolerance for stress and teamwork. The dimension measuring operational efficiency and flexibility was broken into four facets, namely adaptability,

enthusiasm, problem solving and reliability. The scale thus consisted of three dimensions and ten subscales.

Item development. The initial set of items was derived from two sources: (1) established, previously validated scales, and (2) new items written on the basis of the results of job analysis and content relevancy. Approximately 90 items were selected from the existing scales on the basis of their potential to measure the dimensions of the scale being developed. The items that reflected the scale's purpose were chosen. The items were then examined so that those that were clear, unambiguous, and concrete could be included. This procedure resulted in the elimination of potentially poor items.

Several new items were written to more thoroughly cover the constructs deemed important for quality service. These items were written on the basis of their job relevance and in order to address areas not yet tapped, but identified as important during the job analysis. Specifically, items that focused on problem solving, and reliability were developed. This procedure resulted in an initial pool of 72 items, which included many reversed items to control for response style bias.

The items produced in the item generation phase were presented in a Likert-type scale format. Respondents indicated their agreements with each statement on a five-point scale ranging from strongly disagree to strongly agree, 1 being strongly disagree, and 5 being strongly agree. Higher mean scores for the items indicated that the individual is more likely to possess and exhibit traits that lead toward good customer service performance and behavior. Few items in each subscale were reverse scored so that a response of 1 lead to the individual getting higher rating and vice versa. The Likert-type

particular format was chosen, as it was more pragmatic from the viewpoint of time and ease taken in completing the survey. Also, considering the possibility that the respondents might not actually have an opinion about certain questions, they were presented with a "neither agree nor disagree" option as a forced choice in such a case would have affected the reliability of the scale.

Item selection. After administering the questionnaire to the sample, the initial pool of items was assessed to see if they met certain criteria for inclusion. The selection criteria including identifying ambiguous wording and redundancy of items, and to see that they were well written, clear, and contained a single idea within the dimensions. Reading difficulty of the items was assessed and a reading level between the fifth and seventh grades was aimed at. Each item was examined to determine its contribution to the internal consistency of the entire scale. This decision was based on the examination of the correlation among the items as well as the inter-item consistency. This resulted in the elimination of 26 items from the questionnaire with the final scale consisting of 46 items.

The final scale. The final scale, with the individual items as grouped into dimensions and subscales, has been presented in Table 12 . The first and the second dimensions (namely, interpersonal behavioral skills and effective coping with job demands) had a total of 15 items, with 5 items in each of their three subscales. The third dimension, operational efficiency and flexibility, had a total of 16 items, with each of the four subscales comprising of four items.

Job Performance Measure

The job performance measure was derived and modified from a scale developed by Williams and Anderson (1991). Their scale had a coefficient alpha estimate of .91. Scale anchors for the nine item scale ranged from 1 = “almost never” to 5 = “almost always.” Higher scale score indicated that the call center representatives were engaging in behaviors leading to good performance on their current job.

Guidelines for modifying the job performance measure used in the study were derived from the performance review of current call center agents. The review provided an insight into the criteria over which the supervisors judged the effectiveness of the customer service agents. The performance elements on which supervisor evaluation was based were Quantity (productivity), Quality (accuracy and thoroughness), Job Knowledge, Problem Solving, Communication, Cooperation, Judgement, Adaptability, Safety and Security, and Attendance and Punctuality. The scale items measuring job performance of the customer service representatives are included in Table 13.

Procedure

Customer Service Representatives

The newly developed questionnaire was presented to the participants as a study on characteristics and traits of customer service representatives. The participants were given both written and oral instructions, which included a letter indicating that their participation was voluntary, and that their responses would be kept confidential. The letter also indicated that the responses to the measure would only be used for research

purposes and would not be used to evaluate them or jeopardize their relationship with their organization in any way. A copy of each letter is found in the Appendix.

Supervisors

The nine-item measure administered to the supervisors was used to assess the job performance of the call center representatives under their direct supervision. The supervisors were also given both written and oral instructions, which included a letter indicating that their participation was voluntary, and that their responses would be kept confidential. Further, they were instructed to be as accurate and fair in their ratings as possible and not let any severity or leniency affect their judgement. No demographic information was obtained from the supervisors.

Results

This section presents the psychometric properties of the newly developed scale and the criterion measure used in the study for validation purposes. The results of the factor analysis performed on the scale as well as the job performance measure are also presented in this section. Finally, the results of the validation study undertaken to validate the newly designed, self-report, call center screening questionnaire have been reported.

Descriptive Statistics

The means and standard deviations of the test, dimensions and subscales are presented in Table 3. The mean of the 46-item test was 3.98 on a scale of 1 to 5 ($SD = .31$), thus showing that the majority of participants responded in the “agree” range of possible answers, with very little variability in their responses. This suggests that in

general, the respondents exhibited an above average level of customer service orientation. This finding was replicated for the dimensions and subscales as well which also showed a trend for high means (above 3.5). In terms of the dimensions, interpersonal skills had a higher mean ($M=4.03$) than coping ($M=3.97$) and operational efficiency ($M=3.95$). This indicates that in comparison to dispositional characteristics associated with efficient working and coping with the demands of the job, respondents displayed higher levels of interpersonal behavioral skills.

An examination of the means for the 10 subscales indicated that high level of traits associated with reliability ($M=4.19$), teamwork ($M=4.15$), self-control ($M=4.12$) and consideration ($M=4.15$) were displayed by the agents. Although no general pattern was evident for subscales within and across the dimensions, low standard deviations for the subscales were reflective of little variability in the responses of the agents. This finding was disappointing since little variance hinder the correlations and thus could negatively affect further interpretation of the findings of the study. However, since some subscales consisted of more reverse scored items than the other subscales, high means for all subscales showed that the tendency to answer the items in a biased manner was not adhered to by the participants.

Correlations

Correlations between the dimensions are presented in Table 4. In terms of dimensions, interpersonal skills is positively related to coping ($r = .58$) and operational efficiency and flexibility ($r = .41$), thus suggesting that agents having good interpersonal behavioral skills find it easier to handle the pressures related to job as well as work more

efficiently. However, coping and operational efficiency did not show a significant correlation, thus implying that these dimensions are independent of each other.

An examination of the correlations among the subscales (presented in Table 5) reveals that although the second and the third dimensions are independent of each other, this trend is not replicated for the subscales of these dimensions, which show both positive and negative correlations among themselves. For example, the consideration subscale of interpersonal skills is positively related to subscales measuring teamwork, and self-control within the dimension of coping, as well as to adaptability and problem solving that form subscales of operational efficiency. On the other hand, the reliability subscale showed negative correlations with patience ($r = -.35$) and tolerance for stress ($r = -.34$), while self-control was negatively correlated to enthusiasm ($r = -.43$). The negative correlations among the subscales across dimensions were an unexpected finding. However, while it can be assumed that people with high energy levels have less degree of self-control, it is hard to explain low patience and stress tolerance in highly reliable people.

Yet another unexpected finding is that although the subscales across the three dimensions are related, none of the subscales grouped within the three dimensions relate to each other. Considering that the magnitude of correlations for subscales within the three dimensions is relatively moderate, it is possible that the non-significant relation is a function of small sample size. However, an examination of the reliability estimates for these dimensions (presented in Table 3) reveals that the items within these subscales are

indeed measuring the same underlying construct and can justifiably be grouped into a single dimension.

Reliability

The reliability of the measure was assessed using the internal consistency (inter item) method of estimating test reliability. As this was a newly developed scale, it was considered important to obtain the coefficient alpha first and get the average correlations among the items in order to find out how every item correlates to every other item. Further, if the inter-item reliability were low in the first place, there would be no need to make other estimates of reliability because they would prove to be even lower. This would thus give a chance to reconsider the measurement problem and find out if the test is too short or whether the items have very little in common

The internal consistency reliability estimates for the test, dimensions and different subscales are presented in Table 3. Analysis performed on the test resulted in a Cronbach alpha of .84. This alpha level exceeds the recommended level of .70 suggested by Nunnally (1978). Thus, overall the measure seems to be internally consistent and highly reliable. For the three dimensions, the alpha was .74 for interpersonal skills, .73 for effective coping with job demands, and .75 for operational efficiency and flexibility. These alpha levels suggest that the items within the dimensions reflect a single, underlying construct.

Reliability estimate for different subscales resulted in an alpha of .74 for consideration, .68 for empathy, .79 for patience, .73 for self-control, .60 for tolerance for stress, .78 for team-work, .84 for adaptability, .67 for enthusiasm, .75 for problem-

solving, and .66 for reliability. While items forming the subscales of consideration, patience, self-control, teamwork, adaptability, and problem solving seem to be representative of the construct they are supposed to measure, the reliability estimates for the subscales of empathy, tolerance for stress, enthusiasm, and reliability are lower and below the recommended level of .70, suggesting a broader mix of items or lower homogeneity. Particularly noteworthy is the subscale measuring tolerance for stress with an alpha of .60. It is possible that the low alpha level is due to problems associated with the conceptualization of this construct. Stress, as a construct, has defied satisfactory conceptual development (Spector, 1992) and it is possible that the test takers interpreted the items related to stress very differently from each other.

An examination of item-total correlations for the scale showed that the mean inter-item correlation was .30. and thus within the range of .20 to .40 suggested by Briggs and Cheek (1986). Further analysis showed that deleting the items that had an item-total correlation of less than .20 would improve the alpha only slightly (from .84 to .85), and thus all items could be retained in the scale.

Factor Analysis

Although the scale was not intended to be a factorially pure construct, three separate factor analyses were conducted to examine the dimensional structure of the measure. Since this was a newly develop scale and an exploratory study, a principal components factor analysis stipulating varimax rotation was performed on the three dimensions of the scale.

The factor loadings for the first dimension are presented in Table 6. For the first dimension (Interpersonal Skills), five factors were extracted that accounted for 71.04 % of the total variance of the 15 items. All the items loaded at .40 or above were examined. For items loading on more than one factor, higher loadings were considered. The factor loadings for the first dimension show that the subscales of consideration and patience are replicated by the first two factors. While items forming the empathy subscale were fragmented and loaded on both, the third and the fourth factor, the fifth factor consisted only of items loading on more than one factor, and thus was not considered important. Overall, the analysis of the first dimension shows that there is a great deal of similarity between the first two factors and the subscales of consideration and patience. An exception to the similarities between the factor structure and subscales is the subscale of empathy that seemed to be reflected by two different factors. While the loadings of the items of this subscale on two different factors is difficult to explain, each factor accounted for a considerable amount of variance and it is possible that the respondents viewed the items appearing on this subscale as reflective of different facets of empathy.

The results of the factor analysis for the second dimension are presented in Table 7. Five factors accounting for a total variance of 69.54% of the 15 items were extracted for the second dimension (Effective Coping with Job Demands). The factor loadings for the first three factors clearly represented items forming the three subscales of this dimension. The teamwork subscale was replicated by factor 2 exhibiting traits of flexibility and cooperativeness. The subscales of self-control and tolerance for stress appeared to be fragmented into two factors. Items appearing on the self-control subscale

were scattered in factors 1 and 5. An analysis of the items suggested that items appearing on factor one were related to controlling or exhibiting one's feelings of anger, while the two items loading on the fifth factor represented a person's way of responding to unpleasant and provoking situations. Similarly, items forming the tolerance for stress subscale showed loadings on both the third and the fourth factor, with the third factor representing a person's response to stressful situations, and the fourth factor being reflective of one's vulnerability to stress.

The factor loadings for the third dimension have been shown in Table 8. For the third dimension (Operational Efficiency and Flexibility), four factors accounting for 69.85% of the total variance of the 16 items were extracted. The items on the first factor appeared to reflect a person's flexibility and approach towards changing situations and were those forming the adaptability subscale. The items loading on the second factor concerned one's attitude towards work and tasks at hand, and were mainly those forming the reliability subscale. The third factor was defined by items about approach towards complex situations. The factor was thus clearly related to the subscale measuring problem solving. The two items loading highly on the fourth factor were reflective of a person's energy level and constituted the enthusiasm subscale. The analysis of the third dimension shows that while three out of four subscales for this dimension (adaptability, problem-solving, and reliability) were clearly represented by the first three factors, the items on the enthusiasm subscale seemed to be dispersed in two factors.

Overall, the results of the principal component analysis suggest that the subscales that form the dimensions are well represented by the factors. While the analysis for the

first two dimensions having three subscales each resulted in five factors, it should be noted that in such a case either the additional factor had items that loaded on more than one factor, or items on a particular subscale were represented by two factors (e.g., “Tolerance for Stress”). Further, it is noteworthy that the factors were clearly interpretable and seemed to be well connected to the subscales of the dimensions.

Psychometric Properties of the Criterion Measure

In order to group the evaluation measure into constructs or domains of performance, a principal components factor analysis stipulating varimax rotation was performed on the job performance measure. Two factors were extracted accounting for 65.66% of the total variance.

The factor loadings of the two rotated factors are presented in Table 9. While the first factor accounted for 36.24%, the second factor accounted for 29.42% of the total variance of the nine items. The factors were not completely independent of each other as three out of nine items showed loadings on both the factors. However, items showing highest loadings loaded only on single factors and were clearly representative of different performance elements. Thus, on the basis of the highest loadings and the contents of the items, two variables were created.

The first variable consisted of five items (item numbers 2,3,4,5, and 9). Though item number five loaded equally on both the factors, it was included in the first variable because of content relevance. Items forming the first variable appeared to reflect an agent’s approach towards customer relations and problem solving. As the items seemed

to be targeting an agent's performance in dealing with customers, this factor was labeled as "external performance."

The second variable that was created consisted of four items (item numbers 1,6,7 and 8). This factor was defined by items about an agent's flexibility and reliability (e.g., adaptability, maintaining working relationships and punctuality), and seemed to be related to an agent's performance in handling tasks and dealing within the organization. The factor was thus named as "internal performance." Taking an average of the items forming the two variables, two separate scores were created. In addition to that, a total score of all the nine items forming the performance measure was created.

The descriptive statistics and internal consistency reliability estimates of the composite measure and the two factors are reported in Table 10. Assessing the internal consistency of the performance measure used in the study was considered important because of the modifications of the previously developed measure. Analysis performed on the job performance measure resulted in a Cronbach alpha of .87. For the two factors derived from factor analysis, the alpha was .82 for the first factor and .80 for the second factor. These findings suggest that the performance measure used in the study has a high level of internal consistency.

Validity

A specific purpose of this study was the validation of the newly developed test. Conducting a validity analysis was important in order to determine and demonstrate the potential utility of the test. Further, empirical validation evidence for the test would

provide support for the expected and predicted links between the test and on the job performance.

To evaluate the Call Center Screening Questionnaire, a concurrent validation approach was undertaken. A significant reason for using this approach was practicality. It would be much easier to conduct a concurrent study, since the test scores and the performance scores could be obtained at the same time and in order to obtain a validity coefficient, a significant time lag between the testing and criterion measurement would not be required.

To assess validity, the scale scores of the agents were correlated with the supervisory composite of their job performance. Three separate correlations were obtained for this purpose. First, the scores on the instrument were validated against the performance composite. The correlation between instrument score and performance would postulate links between the personality variables measured by the instrument and current performance as well as provide support for the use of the newly developed instrument as a composite measure. Second, correlations were computed between the composite instrument score and the scores on two factors of job performance identified through the factor analysis of the job performance measure. Since different aspects of job performance were found to be pertaining to the two factors derived out of factor analysis, obtaining correlations between the two performance factors and the composite score would help in identifying the elements of performance that are more closely associated with and influenced by the measured personality variables. Third, correlations were obtained between the dimension scores of the incumbents and their scores on the two

performance factors. Obtaining these correlations were considered important as a secondary goal of the study was to examine the dimensionality of the construct of customer service as it pertains to prediction of performance in a call center environment. Correlations between the dimensions and job performance factors would thus indicate which specific personality variables and dimensions are predictive of what facets of job performance.

The correlations between the instrument and job performance are presented in Table 11. The results of the concurrent validation study showed a significant positive relation between the instrument score and the total score on the performance measure ($r = .35, p < .05$). The scores on internal performance factor were positively related to the composite score ($r = .34, p < .05$), while the correlation between external performance factor and the instrument score approached significance ($r = .31, p = .054$). In terms of the dimensions, effective coping with job demands was significantly related to external performance ($r = .39, p < .05$), and operational efficiency and flexibility showed a significant relation with the internal performance of the agent ($r = .37, p < .05$). Interpersonal skills, however, did not correlate with either of the performance factors.

Summary

The results of the validity analysis support the use of the newly developed test for prediction of job performance of call center personnel. Significant positive relationships were found between supervisory ratings of call center agents' job performance and scores on the customer service orientation ratings on the self report measure. Further, a

significant positive relationship was found between internal (within the organization) performance of call center agents and their customer service orientation. However, the external performance of call center agents could only approach significance when correlated with their self-report ratings. The results of the analysis also showed that internal performance of an agent is related to predisposition towards working efficiently and flexibly, while agents who are able to cope effectively with the pressures inherent in their jobs exhibit good external performance. Interpersonal skills, however, did not show any significant relationship with any of the performance factors and did not seem to contribute to either internal or external functioning of the agents.

Discussion

The purpose of this study was to develop a reliable and valid self-report personality based instrument to assess the customer service orientation of call center personnel. The results of the statistical tests conducted in order to select items for the scale and validate it were reported in the previous section. This section discusses the results of the analyses conducted. In addition, the limitations as well as the theoretical and practical implications and contributions of the study are described. Finally, suggestions for future research are presented.

Discussion of Statistical Analyses

The results of the study indicate that the scale developed in this study is a reliable and valid predictor of job performance among call center personnel. While evidence for high reliability can be found when looking at the high alpha coefficients and inter-item

correlations for the test and its dimensions, evidence for concurrent validity is based on the correlations of the measurement device with actual job performance of incumbents of the position being studied.

In terms of the specific dimensions of personality, the relationship observed between the three dimensions of the scale suggest that the personality dimension of interpersonal skills is significantly and positively related to the effective coping with job demands and operational efficiency and flexibility, while coping and operational efficiency are uncorrelated to each other. This finding seems to suggest that operational efficiency and the ability to effectively handle the demands of the job are in some way affected and aided by the interpersonal skills one has. However, the lack of a significant relationship between coping and operational efficiency cannot necessarily be taken as disappointing. It is well possible that the obtained values of correlation are affected because of the small sample size. Perhaps with a larger sample size the obtained correlation would be significant. It also cannot be overruled that these two dimensions are actually independent of each other and are representative of two very different, yet important aspects of service orientation.

The results of the principal components analyses clearly suggested the presence of readily interpretable factors within the dimensions of the scale and justify the grouping of items into various subscales. With few exceptions, the factors extracted in the three dimensions are clearly representative of the subscales, and support the applicability of an individual item to the subscale to which it was expected to belong. As the relationship between the factors and the originally hypothesized subscales is easily evident, the

subscales within the dimensions can justifiably be retained. Exceptions to these general findings are the subscales of empathy, tolerance for stress, enthusiasm and reliability, whose items break into two factors.

An evaluation of these exceptions reveal that even though the items loading on these subscales seemed to be represented by two different factors (e.g., empathy and tolerance for stress), each factor accounted for a considerable amount of variance and the items were reflective of different facets of a single concept and not two separate constructs. For example, items from the subscale of tolerance for stress loaded on two different factors where one factor represented a person's vulnerability to stress while the other his response to stress. It is well possible that these personality variables are particularly important for functioning effectively in this type of job, thus making it more likely for the incumbents of the position to break them into additional components. Nevertheless, items loading on both the factors are tapping into different facets of the same personality variable and can reasonably be combined into a single subscale.

It is important to note here that the reliability estimates of these subscales, whose items did not load entirely on a single factor, were lower than the recommended level of .70. In such a case, it might be useful to change the item wordings or add more items to these subscales. But since the scale is designed to be used as a composite measure and the reliability estimates for the entire scale and the dimensions are good, it is reasonable to retain these items within these subscales until it is determined by further analyses that some items are not important. Further, since the factor structure does not show great

deviation from the originally constructed subscales, it suggests that the subscales are not in error and can safely be retained.

The arguments for the validity of the newly developed scale draw on correlations between: (1) total test scores and the performance composite, (2) total test scores and scores on job performance factors, and (3) dimension scores and scores on job performance factors. Since the test was developed to be used as a composite measure it was considered important to obtain the relationship between total scores and scores on the job performance measure. Significant positive relationship between the test scores and performance of the agents reiterate what has been learned so far about personality-performance links, thus reinforcing that personality predicts performance.

Results for the correlation between test and the two performance factors show that the personality traits measured by the test are more predictive of internal performance of the agents. It is noteworthy here there a job analysis was used to choose the personality traits measured by the test. While performance in customer service type positions is usually measured in terms of external dealings, results of the job analysis of a call center agent's position for the purpose of this study pointed towards the importance of internal functioning. Considering the important role that internal organizational performance plays in a call center representative's position, it is not surprising that the employees rated high on internal functioning by the supervisors were the ones getting high scores on the test. However, it should not be overlooked that the relation between external performance and test scores approached significance, and while the validity of the test in

predicting external performance appears to be relatively weak, the overall relationship between them may not be completely non-existent.

While the scale scores were significantly and positively related to both composite and factor scores on the criterion measure, correlation between dimension scores and scores on performance factors indicate support only for dimensions measuring effective coping with job demands and operational efficiency and flexibility. This study, thus, did not find a significant relation between interpersonal behavioral skills and any of the performance factors. Perhaps the lack of identified relationship between job performance and interpersonal skills is a function of the performance elements that matter and are measured for this type of job. Since no face to face contact is required in call center personnel's job duties, success in this type of job depends more on how effectively one handles the pressures of the job than whether or not the person is polite and sensitive enough over the telephone. Although there is no direct evidence, some support for this proposition comes from Rogelberg et al. (1999), who, based on their study of the interaction of service predisposition and job characteristics, suggested that service predisposition (mainly defined by interpersonal skills) may be more related to customer service providers who interact with customers on a face to face basis than for those who interact via telephone. They argued that multiple interactions over phone may allow even those less predisposed to service, to develop a rapport and understanding of customer needs over time.

While plausible explanations for the lack of significant findings can be given, it is important to note that this lack of correlation stands in contrast to previous research that

has mainly emphasized on interpersonal behavioral skills as the most important predictor of performance in customer service related jobs. Further, it also provides support for the argument that personality variables associated with performance and success in a call center position may be different from those associated with performance in other customer service type positions. Thus, the finding stresses the importance and usefulness of dispositional characteristics other than interpersonal skills for selection purposes as well as extends support for the use of custom-built devices for specific type of service positions.

Given the previous research on the personality predictors of customer service behavior, it should not be surprising that scores on measure of personality traits are related to supervisory assessment of job performance. However, it should be acknowledged that the measure developed in this study is not only strictly a personality measure but has been conceived within a very specific context of customer service as it relates to call center personnel. While research so far has mainly emphasized on the importance of interpersonal behavioral traits for predicting success in a customer service type job, this study has stressed on the importance of personality variables other than interpersonal skills, and has explored the multidimensionality of the construct of customer service in a call center domain.

Theoretical and Practical Implications

The present study extends support for personality measures as valid predictors of performance. The results of the study are also consistent with early findings where researchers have found personality testing to be appropriate for customer service type

positions (e.g.; Hogan et al., 1984). While the present study was partially guided by the existing literature on service orientation, it also asserted that not all service positions should be viewed similarly and the measurement of personality variables associated with customer service jobs should be guided by a proper study of the type of service provider. The findings of the study thus support the assertions of Rogelberg et al. who, along with providing a typology of service providers, stressed the importance of considering the role of dispositional variables in light of the differences between the service provider's position.

An important feature of this research was the identification of different dimensions of customer service performance as associated with a call center agent's position. While the identified dimensions were the result of a proper job analysis, they do provide support for the proposition that customer service is a multidimensional construct. In this regard, the study supports Fausz's (1994) observation that service orientation has been conceptualized as a multidimensional construct consisting of three to eight factors. Further, while the multidimensional nature of the construct of service orientation stands supported, it is important to note that the dimensionality is also a result of how the construct was operationalized. Where most of the scale developers have taken the deductive approach to develop their scales, this study followed an inductive approach where the scale development effort began with a clearly defined construct, and the construct definition guided the subsequent scale development. Baydoun et al. (2001) identified the issue of inconsistent operationalization of the customer service construct from one study to the next. Although their suggestion for some construct validation

efforts will provide some clarification about the nature of the construct, it only applies to those customer service jobs that are generalizable across different work settings. In the present study, the scale was developed for a specific type of customer service position and the contents identified were a result of job analysis. In cases where generalizability of particular instruments might not be very helpful, it would be more advisable to operationalize the construct as per the nature of the job.

The study also offers some practical implications. A major application of the present study is in regard to personnel selection. This study clearly indicates that customer service orientation is an important predictor of employee performance in a call center agents' job. In light of the fact that call centers are stressful places to work and prone to high turnover, managers can adopt selection procedures which help them to identify applicants who have the dispositions to work effectively in such high pressure work settings before making a significant investment in hiring and training them. Proper and effective selection techniques will not only affect the attrition rate in a positive way, hiring the right personality type for the job would also result in more satisfied customers along with providing an added advantage in business. Thus, longevity of a company can hinge on this complex role, and hiring for the proper personality, along with proper customer focused skills can help lay the customer service foundation internally.

Another practical consideration relates to the choice of selection tools. While the affect of personality traits on future job success is accepted unanimously today, managers opting for use of personality based measures for selection purposes should consider the possibility that in some service settings, dispositional characteristics other than

interpersonal skills may be more warranted. Managers in service organizations may ignore the differences that exist between different types of service positions, and may indulge in over attributing performance to only interpersonal skills. Thus, based on the findings of this study, it would not be inept to suggest that while making a choice of selection instruments managers should first examine the personality variables that have a considerable impact on the effective functioning of the personnel for that particular job, rather than choosing the instruments that are designed for general use which might not prove to be very beneficial.

Strengths and Limitations of the Present Research

The current research has much to commend itself in that the development of the scale was based primarily on a thorough job analysis and a thorough examination of the existing literature. The dimensions to be included in the scale were guided by a proper definition of the construct and a thorough study of the performance elements of the position being studied with minimal reference to already established ideas. Secondly, while the use of most of the existing scales need an assessment of the similarity between the customer service position that the test is being used for and the position that was used in the validation studies, no such limitation accompanies this instrument as the validity of the scale was assessed in the same job setting for which it was originally developed. Thirdly, service predisposition in customer service related literature has mainly been studied and measured in relation to interpersonal skills as defined by personality variables such as courtesy, politeness, helpfulness, and friendliness (e.g., Hogan & Hogan, 1986; Folgi & Whitney, 1991; Paajanen, 1993). However, this study asserted that not all

customer service positions are similar and that the differences underlying them require an identification of personality variables specifically associated with them. In the case of the present study the relationship between job performance and interpersonal skills was not found to be related while performance was found to be related to the skills associated with operational efficiency and handling other job demands.

Despite certain strengths, there are some limitations that should be recognized in interpreting the findings of this study as well as some learning that can inform future research. The limitations of the study being addressed here include those due to sample size, methodology and statistical analysis.

The first limitation of this study is primarily due to a small sample size. Correlations obtained in the study were moderate in magnitude but failed to reach statistical significance. Since correlations are greatly affected by the size of the sample, great caution is needed while interpreting the results of the analyses. A more accurate assessment of the relationship between the studied variables might have been obtained with a fairly large sample size.

Another limitation of this study lies in the strategy adopted to validate the measure. This study involved a concurrent validation approach where validity test involved simultaneous data collection from a sample of respondents on the scale of interest and on the criteria, hypothesized to relate to the scale of interest. A concurrent validity study presents some conceptual as well as statistical problems. Conceptually, this type of validation study mainly comprises of people who are already performing at acceptable levels while containing very few, if any, marginal or poor performers. As a

result of this, the correlation between test scores and criterion scores measures the validity of the test in discriminating acceptable rather than poor performers from superior performers, and thus may not necessarily reveal much about the validity of decisions. Further, results in this concurrent study may have been affected by the lack of motivation on the part of already employed staff in completing the test. Individuals who are secure in their jobs, who realize that their test scores in no way will affect their job standing, and who are participating in a research study, are not motivated to the same degree as are applicants for jobs (Cascio, 1998)

A statistical limitation associated with a concurrent validation strategy is the restriction of range. Usually companies retain good performers and fire those who do not perform well. This might have lead to the range of criterion scores being much smaller than in the general population. Range restriction could also have occurred because of the self-report nature of the predictor measure. While self-report measures do provide meaningful information, they tend to be inflated and restrict the variability of test scores, thus eventually reducing the correlation between the test scores and the criterion measure (Rogelberg et al., 1999) . In the present study, the participants exhibited a moderate to high customer service orientation on their self-report test scores. While one explanation for this may be that the company that participated in the study only retained people who performed at least moderately well, high scores on the test may also have been caused by the fact that one criteria of test development included a review of performance elements on which the current employees were rated and given a feedback in their annual appraisals. As statements in the test were reflective of the dimensions on which the

current incumbents were usually evaluated, the familiarity with the expectations from the incumbents of this job might have persuaded them to give a socially desirable response eventually inflating their self-ratings.

The third limitation in the study relates to the criterion measure, which was limited only to supervisory ratings of job performance. Fausz (1994) suggested that researchers should investigate customer service orientation from several perspectives so as to avoid the potential sources of error in supervisor ratings like the personal characteristics of the supervisor and self-serving attributions. It would be helpful to get customer ratings on the performance of the incumbents so that the limitations of relying solely on managerial ratings of performance can be overcome.

Suggestions for Future Research

As stated earlier, the validation of the measure developed in this study was limited to concurrent validation strategy. Additional research using a construct validity design is recommended. Research suggests that the Big-Five taxonomy of personality offers a useful model to summarize the personality correlates of customer service measures. Therefore, it may be useful to collect information on the current scale and an existing measure of the Big Five in order to examine the convergent validity of the two scales. Although the criterion-related validity estimates provide support for the use of this measure, one limitation of the study was a very small sample size. Collecting more data as well as reanalyzing the data with empirically derived range-restriction data, could further refine the validity estimates.

As stability is an important indicator of reliability, future studies should also work on determining the test-retest reliability of the scale. Since this type of reliability reflects measurement consistency over time, it will help to identify whether the newly designed scale measures enduring personality traits or whether customer service orientation is simply a “state” variable rather than a “trait” variable.

A number of authors have discussed the important impact of motivation and organizational commitment on the service quality and good performance in customer service roles (e.g., Fausz, 1994; Kelley, 1992). Future research should attempt to examine whether, employees selected because of their predisposition towards customer service, exhibit considerable differences in performance based on their motivation level and organizational commitment.

Future research might also be conducted in various call-center settings, as the data collected in this study were from a single organization. This would help in establishing the generalizability of the empirical findings of this study to other call-center settings. Finally, additional research, using adequate sample sizes, is needed to assess the incremental validity of the scale over other methods used for the selection of call center personnel.

Table 1 Demographic characteristics of the sample

Demographics	<u>M</u>	<u>SD</u>	<u>N</u>	<u>%</u>
Age	34.10	9.66		
Gender				
Male			13	28.3
Female			32	69.6
Ethnicity				
African American			17	37.0
Caucasians			12	26.1
Hispanics/Latinos			4	8.7
Mexican Americans			2	4.3
Native American/Alaskan			2	4.3
Mixed Heritage			2	4.3
Asian Americans			1	2.2
Southeast Asians			1	2.2
Others			2	4.3
Education Level				
High School Graduate			21	45.7
AA Degree Holder			9	19.6
College Graduate			6	13.0
Training/Vocational Certification			6	13.0
Graduate			1	2.2

Note: N value for different demographic variables is reflective of missing data.
Total n = 46.

Table 2 Customer Service Orientation Model

<u>DIMENSION</u>	<u>COMPETENCY</u>	<u>DEFINITION</u>
Interpersonal Behavioral Attributes	Consideration	Is courteous, polite, and friendly in dealing with customers.
	Empathy	Is sensitive and understanding. Makes an effort to know the customer and understand the customer's needs.
	Patience	Is a good listener. Makes an effort to listen to other people's problems.
Effective Coping With Job Demands	Self-Control	Remains polite and restrained in difficult situations with difficult people.
	Tolerance for Stress	Remains untroubled, cheerful, and calm in stressful situations.
	Team Work	Gets along with other employees and difficult customers. Develops supportive relationship with them, and creates a sense of team spirit. Exhibits tact and consideration in relations with others.
Operational Efficiency And Flexibility	Adaptability	Is open to new approaches and readily adapts to changing circumstances. Has a flexible attitude and adjusts to best fit different situations.
	Reliability	Is trustworthy and dutiful. Is likely to complete jobs on time, keep firmly to deadlines, and persist with all tasks until they are finished.
	Enthusiasm	Can sustain high level of energy over long periods of time. Doesn't get tired too soon.
	Problem Solving	Identifies potential difficulties and their causes. Generates workable solutions and makes rational judgements.

Table 3 Descriptive statistics and reliability estimates for the test, dimensions, and subscales (N = 40)

Dimension (number of items)	Subscales (number of items)	<u>M</u>	<u>SD</u>	Alpha
Interpersonal skills (15)		4.03	.44	.74
	Consideration (5)	4.15	.64	.74
	Empathy (5)	3.98	.60	.68
	Patience (5)	3.95	.72	.79
Effective coping with job demands (15)		3.97	.41	.73
	Self-control (5)	4.12	.64	.73
	Tolerance for stress (5)	3.63	.66	.60
	Team work (5)	4.15	.49	.78
Operational efficiency and flexibility (16)		3.95	.38	.75
	Adaptability (4)	3.89	.77	.84
	Enthusiasm (4)	3.81	.62	.67
	Problem solving (4)	3.93	.66	.75
	Reliability (4)	4.19	.47	.66
Total (46)		3.98	.31	.84

Table 4 Pearson correlations between dimensions

Dimension	Interpersonal skills	Coping with job demands	Operational efficiency and flexibility
Interpersonal skills	-		
Coping with job demands	.58**	-	
Operational efficiency and flexibility	.41**	.08	-
** $p < .01$ (two-tailed significance)			

Table 5 Pearson correlations between subscales as grouped into dimensions

Dimensions	Subscales	Consideration	Empathy	Patience	Self-control	Tolerance for stress	Team work	Adaptability	Enthusiasm	Problem solving	Reliability
Interpersonal skills	Consideration	-									
	Empathy	.30	-								
	Patience	.24	-.04	-							
Effective coping with job demand											
	Self-control	.38*	.42**	.18	-						
	Tolerance for stress	.16	-.18	.42**	.21	-					
	Team work	.65**	.12	.30	.26	.13	-				
Operational efficiency and flexibility											
	Adaptability	.51**	.06	.42**	.07	.29	.21	-			
	Enthusiasm	.22	-.14	.35*	-.43**	-.07	.27	.18	-		
	Problem solving	.42**	.23	-.04	.21	-.13	.19	.26	.20	-	
	Reliability	-.01	.00	-.35*	-.07	-.34*	.24	-.29	.29	.31	-

* p < .05 (two-tailed significance)

**p < .01 (two-tailed significance)

Table 6 **Factor loadings after varimax rotation for interpersonal skills**

Item number	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
CS 66	.79*	.07	.25	.07	.06
CS 14	.74*	.13	-.02	-.02	-.10
CS 58	.74*	.22	-.28	.16	-.16
CS 19	.65*	-.25	.28	.15	.39
CS 44	.52*	.06	.68*	.11	.19
CS 35	.51*	.67*	.09	-.03	.04
CS 42	.17	.84*	.08	-.21	.05
CS 34	.07	.81*	-.33	.16	.15
CS 3	-.01	.68*	-.02	.07	-.09
CS 43	-.07	-.03	.85*	.05	-.07
CS 37	.11	-.14	.59*	.45*	-.12
CS 69	.01	-.10	.06	.86*	.08
CS 38	.38	.19	.12	.60*	-.03
CS 4	-.10	.22	.29	.57*	-.61*
CS 8	-.17	.55*	.00	.16	.70*
Eigenvalue	3.78	2.83	1.78	1.25	1.00
% of variance	19.42	18.76	13.20	12.00	7.65

Note: An asterisk indicates items loading greater than .40 on a factor

Table 7 **Factor loadings after varimax rotation for coping with job demands**

Item number	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
CS 39	.86*	.18	-.02	-.02	.20
CS 36	.84*	.06	-.13	.01	.05
CS 63	.79*	.00	.42*	.02	.16
CS 49	.41*	.13	.48*	.27	.04
CS 50	-.01	.81*	-.13	.20	-.09
CS 57	.02	.77*	.29	-.11	-.12
CS 48	.33	.69*	.25	-.28	-.05
CS 21	.04	.65*	.11	.01	.53*
CS 26	.38	.55*	.22	-.33	.20
CS 59	-.03	.21	.75*	.11	-.07
CS 68	.03	.06	.72*	.05	.33
CS 23	.06	-.16	.01	.90*	.03
CS 70	-.02	.06	.26	.78*	-.02
CS 5	.09	-.02	-.02	.09	.77*
CS 20	.28	-.07	.22	-.15	.72*
Eigenvalue	4.06	2.14	1.88	1.32	1.03
% of variance	17.24	17.23	12.36	11.78	10.94

Note: An asterisk indicates items loading greater than .40 on a factor

Table 8 Factor loadings after varimax rotation for operational efficiency and flexibility

Item number	Factor 1	Factor 2	Factor 3	Factor 4
CS 25	.88*	.01	.00	-.11
CS 60	.81*	-.08	-.08	-.18
CS 12	.77*	-.21	-.02	.18
CS 67	.73*	-.14	.13	.09
CS 33	.70*	.40*	-.11	.27
CS 30	.55*	.01	.64*	.05
CS 47	.12	.85*	-.03	.10
CS 72	-.19	.73*	.05	.04
CS 31	-.34	.62*	-.07	.43*
CS 71	.00	.58*	.40*	-.07
CS 46	-.11	.54*	.56*	-.17
CS 53	.37	.42*	.46*	.35
CS 65	-.26	-.01	.87*	-.21
CS 28	.09	.09	.83*	.21
CS 24	.02	.02	.20	.87*
CS 11	.05	.11	-.19	.86*
Eigenvalue	3.86	3.47	2.34	1.50
% of variance	23.35	16.75	16.59	13.16

Note: An asterisk indicates items loading greater than .40 on a factor

Table 9 **Factor loadings after varimax rotation for
the job performance measure**

Item	External Performance	Internal Performance
3. Gathers appropriate information to assess customer needs and generate workable solutions	.90*	.01
4. Identifies the existence of problems quickly and demonstrates sound judgement in most areas of the job	.87*	.28
9. Displays good communication and interpersonal skills when dealing with customer	.73*	.16
2. Performs most duties independently, without instructions from supervisor	.63*	.40*
8. Arrives for work on time; gives advance notice if late or absent	.57*	.55*
5. Does not let personal problems affect service performance negatively	.51*	.51*
7. Establishes and maintains good working relationships with colleagues	-.04	.81*
6. Adapts readily and positively to changes in job	.33	.78*
1. Adequately completes assigned duties in a timely manner and meets most deadlines	.27	.74*
Eigenvalue	4.61	1.30
% of variance	36.24	29.42

Note: An asterisk indicates items loading greater than .40 on a factor.

Table 10 **Descriptive statistics and reliability estimates for job performance measure**

Factors (number of items)	<u>M</u>	<u>SD</u>	Alpha
External performance (5)	3.23	.71	.82
Internal performance (4)	3.13	.76	.80
Total (9)	3.18	.67	.87

Table 11 **Pearson correlations between instrument and job performance**

Job performance	Instrument score	Interpersonal skills	Coping with job demands	Operational efficiency and flexibility
Performance composite	.35*	.18	.34*	.28
External performance	.31	.15	.39*	.17
Internal performance	.34*	.19	.22	.37*

*** $p < .05$ (two-tailed significance)**

Table 12 The final instrument with questions grouped into dimensions and subscales

Interpersonal Skills

Consideration

- 14. I like to help others do their work.
- 19. Having friends is important to me.
- 38. I enjoy doing things that make others happy.
- 58. I enjoy helping others.
- 66. I go out of my way to help others.

Empathy

- 4. One should try to sympathize with others' feelings.
- 37. I am indifferent to the feelings of others.
- 43. It is a good idea to express sympathy with anyone who has a complaint.
- 44. I like making people feel better.
- 69. I am sensitive to other people's emotions.

Patience

- 3. When it comes to interacting with people, I am a better listener than a talker.
- 8. I get irritated by people's faults.
- 34. I am a good listener no matter whom I talk to.
- 35. I get irritated easily.
- 42. I can be easily annoyed.

Effective coping with job demands

Self- Control

- 5. I get annoyed at the slightest provocation.
- 20. I keep calm even in tense situation.
- 36. I have a hard time controlling my feelings.
- 39. I lose my temper easily.
- 63. I quickly express my anger with others.

Stress

- 23. I tend to worry a lot.
- 49. Negative feedback upsets me.
- 59. My problems usually get me down.
- 68. I remain calm under pressure.
- 70. I tend to things too personally.

Teamwork

- 21. I am able to make decisions under pressure.
- 26. I work well in a team environment.
- 48. I like to be part of a team.
- 50. I enjoy group activities.
- 57. People who know me say I am a flexible person.

Operational efficiency and flexibility**Adaptability**

- 12. I am open to change.
- 25. Constant change seems unsettling to me.
- 60. I think change is disruptive.
- 67. I have difficulty in adjusting to different situations.

Enthusiasm

- 11. Those who know me say I have an extremely high energy level.
- 24. I am able to sustain high levels of energy.
- 33. I adapt easily to new situations.
- 47. I typically work quickly and energetically.

Problem Solving

- 28. I am able to persist in seemingly hopeless situations.
- 30. I like participating in problem solving situations.
- 53. In a problem situation, I analyze all options and alternative solutions.
- 65. I resolve or minimize problems before they grow into larger issues.

Reliability

- 31. I accomplish my work on time.
- 46. I perform all the tasks assigned to me conscientiously.
- 71. I can be counted on to follow through on my commitments.
- 72. I arrive early for meetings and appointments.

Note: Items 5,8,23,25,35,36,37,39,42,49,59,60,63,67, and 70 are reverse scored.

Table 13 **Items measuring the job performance of customer service representatives**

- 1. Adequately completes assigned duties in a timely manner and meets most deadlines.**
- 2. Performs most duties independently, without instructions from the supervisor.**
- 3. Gathers appropriate information to assess customer needs and generate workable solutions.**
- 4. Identifies the existence of problems quickly and demonstrates sound judgement in most areas of the job.**
- 5. Does not let personal problems affect service performance negatively.**
- 6. Adapts readily and positively to changes in job.**
- 7. Establishes and maintains good working relationships with colleagues.**
- 8. Arrives for work on time; gives advance notice if late or absent.**
- 9. Displays good communication and interpersonal skills when dealing with customers.**

Items Derived and Modified From:

Williams, L.J., & Anderson, S.E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. Journal of Management, 17(3), 601-617.

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APPENDIX



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CONSENT FORM

This study is being conducted by Ekta Vyas, a graduate student at the Department of Psychology at San Jose State University. If you agree to participate in the study, you will be interviewed and then observed silently during working hours. Then you will be given a self-evaluation questionnaire and your supervisor will be given a questionnaire to evaluate your job performance. The study will take you about 25 minutes to complete.

Participation in this study is on a voluntary basis; therefore, you may refuse to participate in the entire study or in any part of the study. No service of any kind, to which you are otherwise entitled, will be lost or jeopardized if you choose not to participate. If you decide to participate in the study, you are free to withdraw at any time without any negative effect on your relations with San Jose State University or Zomax Inc.

All of your response to the questionnaires will be completely anonymous. In addition, the data from the study will be kept separate from the consent form and reported as group totals; no individual responses will ever be identified. Although the results of the study may be published, no information that could identify you will be included. There are no anticipated risks involved in the study; probability and magnitude of harm or discomfort are no greater than encountered in daily life. No compensation of any kind will be given for participating in the study.

If you have additional questions regarding the study, you may contact Ekta Vyas at 408-945-7634. Any complaints about this research may be presented to Dr. Robert Pelligrini, Chairperson, at the Department of Psychology (408-924-5614). Questions about research subjects' rights, or research-related injury may be presented to Nabil Ibrahim, Ph.D., Associate Vice President, Graduate Studies and Research, at (408) 924-2480.

At the time that you sign this consent form, you will receive a copy of it for your records, signed and dated by the investigator. Please sign below to indicate your voluntary consent to participate. Thank you very much.

Signature

Date

Investigator's Signature

Date

The California State University:
Chancellor's Office
Bakersfield, Chico, Dominguez Hills,
Fresno, Fullerton, Hayward, Humboldt,
Long Beach, Los Angeles, Maritime Academy,
Monterey Bay, Northridge, Pomona,
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CONSENT FORM

This study is being conducted by Ekta Vyas, student at the Department of Psychology at San Jose State University. If you agree to participate in the study, you will be given a rating form on which you will have to rate the job performance of the customer service agents you directly supervise. The study will take you about 10 minutes to complete.

Participation in this study is on a voluntary basis; therefore, you may refuse to participate in the entire study or in any part of the study. No service of any kind, to which you are otherwise entitled, will be lost or jeopardized if you choose not to participate. If you decide to participate in the study, you are free to withdraw at any time without any negative effect on your relations with San Jose State University or Zomax Inc.

All of your response to the questionnaires will be completely anonymous. In addition, the data from the study will be kept separate from the consent form and reported as group totals; no individual responses will ever be identified. Although the results of the study may be published, no information that could identify you will be included. There are no anticipated risks involved in the study; probability and magnitude of harm or discomfort are no greater than encountered in daily life. No compensation of any kind will be given for participating in the study.

If you have additional questions regarding the study, you may contact Ekta Vyas at 408-945-7634. Any complaints about this research may be presented to Dr. Robert Pelligrini, Chairperson, at the Department of Psychology (408-924-5614). Questions about research subjects' rights, or research-related injury may be presented to Nabil Ibrahim, Ph.D., Associate Vice President, Graduate Studies and Research, at (408) 924-2480.

At the time that you sign this consent form, you will receive a copy of it for your records, signed and dated by the investigator. Please sign below to indicate your voluntary consent to participate. Thank you very much.

Signature

Date

Investigator's Signature

Date

The California State University:
Chancellor's Office
Bakersfield, Chico, Dominguez Hills,
Fresno, Fullerton, Hayward, Humboldt,
Long Beach, Los Angeles, Maritime Academy,
Monterey Bay, Northridge, Pomona,
Sacramento, San Bernardino, San Diego,
San Francisco, San José, San Luis Obispo,
San Marcos, Sonoma, Stanislaus